THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 10

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

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Ex parte JOHN D. MILLER, W. LEON COOLEY,
TIM HERMAN and ROBERT R. MOORE

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Appeal No. 95-4838
Application No. 08/131,643[1]

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ON BRIEF

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Before SMITH, John D., LIEBERMAN and SPIEGEL, Administrative Patent Judges.

LIEBERMAN, Administrative Patent Judge.

DECISION ON APPEAL

This is an appeal under 35 U.S.C. § 134 from the decision of the examiner refusing to allow claims 1 through 22 in the

[1] Application for patent filed October 5, 1993.

final rejection dated September 20, 1994, Paper No. 4, which are all of the claims in the case.

THE INVENTION

Appellants' invention is directed to a submicron filter assembly connected to an exhaust gas destruction unit. The submicron filter unit filters submicron particles out of treated exhaust gas and has an output connected thereto. Claim 1 is illustrative of appellants' invention and is reproduced below.

1. A device, comprising:

an input coupled to receive at least one exhaust gas;

an exhaust gas destruction unit connected to said input for treating said at least one exhaust gas;

a submicron filter assembly connected to said exhaust gas destruction unit for filtering submicron particulates out of said treated exhaust gas; and

an output connected to said submicron filter assembly.

THE REFERENCES OF RECORD

As evidence of obviousness, the examiner relies upon the following references:

Yeh	4,066,526	Jan. 3, 1978
Howard	4,303,420	Dec. 1, 1981
Diachuk	4,350,504	Sep. 21, 1982
Kito et al. (Kito)	4,650,647	Mar. 17, 1987
Buelt et al. (Buelt)	4,957,393	Sep. 13, 1990

THE REJECTIONS

Claims 1 through 8, 10 through 16 and 18 through 21 stand rejected under 35 U.S.C. § 103 as unpatentable over the admitted prior art figure 1 in view of Yeh or Kito. Claims 9, 17 and 22 stand rejected under 35 U.S.C. § 103 as unpatentable over the admitted prior art figure 1 in view of Yeh or Kito and further in view of Howard, Diachuk or Buelt.

OPINION

Appellants in their Brief, Page 5, state that claims 1 through 22 stand separately and at least minimally present reasons in their argument as to why appellants consider the rejected claims to be separately patentable. Accordingly, we

will treat the claims as standing or falling separately. 37 CFR § 192(c)(5)(1994).

We have carefully considered the record before us and the respective positions of appellants and the examiner. Based thereon, we shall sustain the rejection of claims 1 through 7, 10 through 15 and 20 through 21. We shall not sustain the rejection of claims 8, 9, 16 through 19 and 22.

The examiner, in his rejection, properly relies on the admitted prior art of appellants, Figure 1 and the accompanying explanation, page 3, lines 10-11 and line 17 through page 4 for disclosure of appellants' claimed device other than the submicron filter assembly. As explained therein, an exhaust destruction unit pulls the exhausted gases into the unit and oxidizes them at high temperatures up to 800° C. The oxidized gases are thereafter directed to an exhaust duct and vented to the air. As a result submicron particles pass through the unit and vent directly into the air. As to additional features required by claims 2 through 5 and 12 through 13, the features claimed therein are likewise disclosed in Figure 1 and the accompanying explanation in appellants' specification, pages 3 and 4. Disclosed therein

are the controlled decomposition oxidation unit of claims 2, 4 and 12. See Figure 1, and accompanying description in the specification, page 3 lines 17-18. Coupling of the input to receive exhaust gas at the point of generation required by claims 3 and 13 is likewise disclosed in Figure 1 and discussed at page 4, lines 2, 3 and 6. The additional input of claim 5 is also taught in Figure 1, gas lines (12), page 3, lines 19-20 of the specification. Based on the above, we conclude that each of these features required by the claimed subject matter are disclosed in the admitted prior art.

The examiner relies upon the secondary references to Yeh and Kito for disclosure of the claimed submicron filter assembly. Both Yeh and Kito disclose the additional treatment of gases with electrostatic forces, functioning as electrostatic filters as required by the claimed subject matter of claims 6, 14, and 21, in order to remove very small particles remaining in said gas.

We essentially agree with the examiner’s conclusion that, “it would have been obvious to one of ordinary skill in the art to provide an electrostatic filter of Yeh or Kito downstream of the CDO unit in order to prevent polluted gases

from venting out to the atmosphere." See Answer, page 4. Moreover appellants' statement in their specification that, "(G)overnments worldwide are taking a more aggressive role in legislating and regulating the amount of air pollution that factories may generate in the United States, at least, each year seems to bring new and more restrictive government air pollution standards," provides in and of itself ample motivation to improve on traditional industrial practices and add on additional particle removing devices such as those of Yeh or Kito to reduce the amount of air pollution and thereby purify the air.

This goal is further recognized by both Yeh and Kito. Yeh discloses an apparatus for separating finely divided particles down to molecular size species by using electrostatic separating forces. See Yeh, column 2, lines 9-41. Moreover, Yeh expressly discloses that his invention may be used for, "removal of particulate matter from a high velocity fluid stream at high temperatures and pressures with negligible pressure drop." See Column 4, lines 25-27. Similarly, Kito provides for the purification of waste gas by an electrostatic precipitator prior to being released to the

air. See Abstract and column 3, lines 15-21. The intent is the removal of particles of less than 20,000 nm from waste gas, i.e. these particles being inclusive of submicron particles. See Kito column 5, lines 15-21. Based upon the above findings, we conclude that it would have been obvious for one of ordinary skill in the art to remove small submicron particles by passing the exhaust waste gas of Figure 1 through the devices taught by either Yeh or Kito. Accordingly, the limitations of each independent claim, 1, 10 and 20, as well as the express limitations of claims 6, 14 and 21, directed to an electrostatic filter are taught by the combined references of record.

As to claim 11 requiring an output for passing the treated and filter exhaust gas to outside air, we concur with the examiner's explanation in his Answer, page 7, wherein the examiner states, "both Yeh and Kito et al clearly teach an output (arrow of Kito et al and 14 of Yeh...." Furthermore see Yeh's description of outdoor air quality control, column 4, lines 22-23, and the purification of air at column 4, lines 24-28. Note also the withdrawal of the fluid medium after electrostatic treatment, column 8, lines 6-9 and column 9,

lines 31-34. The specific removal of particulates from air, is disclosed at column 12, lines 38-39, Tables I and II. Likewise see Kito's discussion of waste gas treatment, column 10, lines 15-31. We conclude that both Yeh's and Kito's method necessarily requires the venting of electrostatically treated air to air.

As to the requirements of claims 7 and 15 for two charged grids to which high voltage alternating current has been applied, the examiner, in support of his rejection refers to 20 and 27 (presumably 30 rather than 27) of Yeh and 4a and 4b of Kito as evidence of two charged grids to which high voltage has been applied. In contrast, appellants argue only that none of the cited references teach or suggest this further limitation. See Brief, Page 10 and 11. In the absence of showing any specific deficiency in the examiner's position we are constrained to agree with the examiner's position that the specified limitations are disclosed by the art of record.

We turn next to the rejection of claims 8, 16, 18 and 19. The examiner in his Answer relies upon Howard for disclosure of the required mist screen. However, neither in the final rejection, Paper No. 4, dated September 20, 1994 nor in the

Examiner's Answer does the examiner rely upon Howard in the statutory rejection of the aforementioned claims. See the Answer, Page 3, Section (9). Hence, we may not consider the disclosure of Howard with respect to these claims. In the absence of this required feature, the examiner's rejection is not sustainable.

Finally, we consider the rejection of claims 9, 17 and 22 as unpatentable over Figure 1 in view Kito or Yeh and further in view of Howard, Diachuk or Buelt. The examiner suggests that motivation to replace the electrostatic filters of Yeh or Kito with a HEPA filter and a mist eliminator would have been obvious to one of ordinary skill in the art in order to simplify the waste gas purifier. See Answer, page 4. We disagree. There is no factual support on the record before us to indicate that the use of a HEPA filter is either simpler than or equivalent to use of an electrostatic filter. Accordingly, the examiner has not shown why the teachings of the applied art should be combined in the proposed manner. "Obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching, suggestion or incentive supporting the combination."

In re Bond, 910 F.2d 831, 834, 15 USPQ2d 1566, 1568 (Fed. Cir. 1990).

Other Issues

In the event of further prosecution the examiner should review at least claim 1 with respect to a rejection on the grounds of anticipation over the reference to Diachuk. In doing so, the examiner should consider whether the oxidizing filter 209, and the oxidizing medium 113 meet the requirements of, "an exhaust gas destruction unit." The examiner should further consider whether the cooking unit and hood meet the requirements of, "an input coupled to receive at least one exhaust gas." In interpreting the scope of the claimed subject matter, claims in an application are to be given their broadest reasonable interpretation consistent with the specification, and read in light of the specification as it would be interpreted by one of ordinary skill in the art. In re Sneed, 710 F.2d 1544, 1548, 218 USPQ 385, 388 (Fed. Cir. 1983).

The examiner is advised to review claims 16, 17 and 19 for proper antecedent basis for, “device” and claims 16 for, “said grounded second grid.”

DECISION

The rejection of claims 1 through 7, 10 through 15, 20 and 21 as unpatentable over Figure 1 in view of Yeh or Kito is affirmed.

The rejection of claims 8, 16, 18 and 19 as unpatentable over Figure 1 in view of Yeh or Kito is reversed.

The rejection of claims 9, 17 and 22 as unpatentable over Figure 1 in view of Yeh or Kito and further in view of Howard, Diachuk or Buelt is reversed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

AFFIRMED-IN-PART

JOHN D. SMITH Administrative Patent Judge	)
PAUL LIEBERMAN Administrative Patent Judge	) BOARD OF PATENT APPEALS AND INTERFERENCES
CAROL A. SPIEGEL Administrative Patent Judge	)

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